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COMMONWEALTH OF VIRGINIA, ex rel.

STATE CORPORATION COMMISSION

CASE NO. PUC990207

**Ex Parte: In re: Petition for
Approval of NPA Relief Plan
For the 540 area code**

REPORT OF DEBORAH V. ELLENBERG, CHIEF HEARING EXAMINER

October 26, 2000

On November 2, 1999, the North American Numbering Plan Administrator (“NANPA”),¹ in its role as the numbering plan relief planner for Virginia and on behalf of the Virginia telecommunications industry (“Industry”), filed a Petition requesting that the Commission order a plan of relief for the 540 Numbering Plan Area (“NPA”).

On December 29, 1999, the Commission entered an Order Assigning Hearing Examiner, in which the Commission: (i) docketed the matter, (ii) assigned a Hearing Examiner, (iii) directed the Examiner to schedule hearings to receive public comments within the area served by the 540 area code, and (iv) ordered the Examiner to direct the Commission’s Division of Communications to publish notice about the time and place of the public hearings and the address and docket number to which written comments could be sent.

By Hearing Examiner’s Rulings entered on January 7, 12, and March 10, 2000, the procedural schedule for this case was established and local hearings were scheduled for 2:00 p.m. and 7:00 p.m. on February 23, 2000, in Roanoke; 2:00 p.m. and 7:00 p.m. on February 24, 2000, in Abingdon; 2:00 p.m. and 7:00 p.m. on February 29, 2000, in Harrisonburg; and 2:00 p.m. and 7:00 p.m. on March 1, 2000, in Front Royal. A final hearing was scheduled for March 22, 2000, at the Commission in Richmond to receive any additional public comments, evidence, and oral argument, concerning the appropriate area code relief for the 540 area code. The Rulings also provided for public notice of the Petition and the hearings scheduled thereon.

The local hearings were convened as scheduled. Pamela Kenworthy, a relief planner for NeuStar, Inc. (“NeuStar”) appeared at each of the local hearings. Ms. Kenworthy described the role and responsibility of NeuStar; the relief alternatives considered by the Industry; and identified the relief

¹At the time of the Petition, the NANPA was Lockheed Martin IMS’s Communications Industry Services Group. On November 17, 1999, the Federal Communications Commission transferred this group to NeuStar, Inc. The transaction was finalized on December 1, 1999.

alternatives presented in the Petition. Seven public witnesses also offered testimony in the Board of Supervisors Meeting Room in the Roanoke County Administration Center, Roanoke. Nine public witnesses testified in the Abingdon General District Court, in Abingdon. Six public witnesses appeared to offer testimony in the Rockingham County Board of Supervisors Meeting Room in Harrisonburg, and eight public witnesses offered testimony in the Front Royal Town Hall. Over ninety letters and written comments were also received by the Commission in this proceeding.

On March 22, 2000, the final hearing was convened as scheduled in Richmond. Don R. Mueller, Esquire, appeared for Staff. Kimberly D. Wheeler, Esquire, appeared as counsel for NeuStar. David W. Ogburn, Jr., Esquire, appeared as counsel for Bell Atlantic-Virginia ("Verizon Virginia").² James B. Wright, Esquire, appeared as counsel to Sprint Communications Company of Virginia, Central Telephone Company of Virginia, United Telephone-Southeast, and Sprint PCS (collectively the "Sprint Companies"). Richard D. Gary, Esquire, appeared as counsel to GTE South, Inc. ("Verizon South") and GTE Wireless, Inc. ("Verizon Wireless").

Jill Butler, a representative of Cox Virginia Telecom, Inc. ("Cox"), appeared in Richmond as a public witness. D. Wayne Milby, a senior NPA relief planner for NeuStar; Deborah T. Grover, manager for regulatory relations for Verizon Virginia; and Sandra S. Boclair, senior telecommunications specialist for the Commission's Staff, appeared as witnesses.

Proof of the required notice of the Petition was marked as Exhibits A and B and admitted into the record. Copies of the transcripts of the hearings conducted in this case are filed with this Report.

A final round of the written comments was also filed on April 18, 2000. That opportunity was provided to allow for more considered comments on the relief alternatives introduced by Staff in its prefiled testimony.

SUMMARY OF THE RECORD

In each of the local hearings Ms. Kenworthy testified that NeuStar had determined there was a need for relief in the 540 area code. Ms. Kenworthy testified that NeuStar had developed a forecast model that tracks existing NXX code³ assignments data by rate center to facilitate exhaust projections. She explained that typically an NXX code has 792 combinations of numbers that are available for assignment. Certain codes such as the 911 or 411 codes are not available for assignment but are reserved for special use or test purposes.⁴

NeuStar convened a meeting on September 23, 1999, to examine the status of the 540 NPA with the Industry. At that time the Industry estimated that numbers in this area code could exhaust as

²On August 1, 2000, Bell Atlantic-Virginia, Inc. changed its name to Verizon-Virginia, Inc.; GTE South, Inc. changed its name to Verizon South; and GTE Wireless changed its name to Verizon Wireless.

³An NXX code is the central office code or the three digits that follow the area code in a phone number.

⁴Transcript 54.

early as the third quarter of 2001. That estimate was later revised to project an exhaust date in the third quarter of 2002.⁵ The Industry estimates that Virginia is running out of telephone numbers because of the recent and unexpected increases in the demand for central office codes as a result of new competitors entering the market and the increase in wireless phones and fax machines. At the September 23, 1999, meeting the Industry discussed four relief alternatives but were unable to reach agreement on which alternative to recommend to the Commission.

The 540 NPA was declared to be in jeopardy in December of 1999, and the NXX code administration was modified. Another Industry meeting took place in January of 2000 and rationing of NXX codes began in February. When the planning meeting took place, the projected exhaust date for 540 was the second quarter of 2002. Rationing and the return of a number of NXX codes resulted in the revision of the projected exhaust date to the third quarter of 2002.⁶

Ms. Kenworthy described three different methods typically considered for area code relief. One method is a geographic split where the existing NPA is divided into two or more separate geographic areas. One area retains the existing NPA and the other area or areas would be assigned a new area code. A geographic split provides a single area code for each geographic area. It may minimize confusion for customers outside the area but reduces the geographic size covered by the area code. A split would require an area code change for approximately 1/2 to 2/3 of the customers in the affected area. Stationery, business cards, and advertisements would need to be revised by customers receiving the new area code. Geographic splits allow seven-digit local dialing within the smaller home NPA but local dialing across the NPA boundary would require ten digits.

A second relief method is called an overlay. One or more NPAs serve the same geographic area. There would be multiple area codes in each geographic area with an overlay. An overlay would require customers to dial ten digits or 1+ ten digits for all calls within the geographic area. Subsequent relief would likely be another overlay. Overlays, however, avoid the need for existing customers to change their area code. There would be no need to revise stationery unless it contained only seven digits.

A boundary realignment is the third relief method generally considered, and would shift the boundary so that spare codes and an adjacent NPA could be used in the NPA requiring relief. The guidelines also allow for a combination of methods.

The Petition sets forth four relief plans considered by the Industry.⁷ NeuStar provided maps that depict each of the four alternatives. NeuStar also developed a central office code utilization projection to derive the projected life for each of the alternatives. The maps are attached hereto collectively as Attachment 1.

⁵Transcript 237; Central Office Code Utilization Survey ("COCUS Report") from NeuStar dated April 2000.

⁶Transcript 240.

⁷Exhibit DWM-1, at 3-4.

Alternative 1 – All-Service Distributed Overlay

The first alternative is an all-service distributed overlay that would retain existing boundary lines, but add a new area code to the same geographic area now covered by the 540 area code. Customers would retain their current telephone numbers, but ten-digit dialing by all customers would be required. Codes in the overlay NPA would be assigned upon request with the effective date of the new area code. At the exhaust of the 540 NPA, all code assignments would be made in the new area code. The projected life of this plan is 10.7 years to 21.5 years.⁸ Ms. Kenworthy, however, admitted that the assumptions made to derive the higher life expectancy had not been validated. Consequently NeuStar intended to focus its analyses on the lower life expectancy.

Alternative No. 2 - Geographic Split

This plan would divide the 540 area code into two areas with the split boundary along the local access transit area ("LATA") boundary between LATAs 927 and 244. Basically, the line separates the northern 540 area south of Rockingham County including a small portion of Augusta County, on the northern side of the line. The area to the north of the split boundary was labeled Area A and the area to the south was designated as Area B. The designations of A and B are arbitrary, but Ms. Kenworthy observed that typically the area with the most growth retains the incumbent NPA and the area that does not have as much growth is usually assigned the new number. The split line runs along the rate center boundaries. The projected life of relief in Area A is 22.4 years. The life of Area B is expected to be only 5.2 years.

Alternative No. 3 - Geographic Split

This plan would divide the 540 NPA near Roanoke along rate center boundaries south of the Paint Bank, New Castle, Salem, Oriskany, Troutville, Buchanan and Bedford rate centers. The line would divide Bedford, Roanoke, and Craig Counties. The projected life of Area A north of the dividing line is 11.4 years. The life of Area B south of the line would be 10.1 years.

Alternative No. 4 - Geographic Split

This plan proposes to divide the 540 NPA along rate center boundaries south of Potts Creek, Eagle Rock, Natural Bridge, and Glasgow. The line would run north of Craig County and divide Botetourt County. This alternative would yield a projected life for relief in Area A of 12.4 years, and a projected life for Area B of 9.3 years.

Seven public witnesses testified on February 23, 2000, in Roanoke. Four favored an overlay and three supported a geographic split. Joseph Fuller, executive director of Dickenson County

⁸The higher projected life assumes that code growth continues at the same rate experienced in 3rd quarter 1999 to 2nd quarter 2002 and then is reduced by 50% beyond the 2nd quarter of 2002. The reduction assumes that the Industry will have some sort of code conservation in place and therefore demand will diminish by 50%. (Transcript 251).

Community Services in Clintwood; David N. Henley, director of telecommunications with the Vans Store in Roanoke; Beth Doughty, president of the Roanoke Region Chamber of Commerce; and Barry L. Snodgrass, regional director for American Electric Power and a representative of the Salem/Roanoke County Chamber of Commerce spoke in favor of an overlay. Mr. Fuller testified that the overlay would be fair to all geographic areas and preclude the extra expense of changing letterhead, business cards, and signs.⁹ He noted that the expense is particularly difficult for small agencies and businesses such as his when funding is not provided to cover the expenses.

Mr. Henley testified that the change to the 540 area code a few years ago was an extraordinary challenge to coordinate with a company as large as his. He noted that thousands of key systems required reprogramming. He urged the Commission to seek ways to minimize the number of times citizens must change area codes.

Ms. Doughty testified on behalf of the interests of 1,500 different businesses in 17 cities and counties currently in the 540 area code. According to Ms. Doughty, area code changes are troublesome and costly to business owners. A change in the area code presents costly communication challenges, not only the cost of making the change but also the cost of communicating that change to customers. She also noted that businesses are challenged with actually losing customers. Alternatives 3 and 4 are particularly troublesome to Ms. Doughty because they divide the Roanoke Valley into two different area codes, disrupting regional identity and attempts to build a regional coalition.¹⁰ She notes learning to use ten digits may take some adjustments but she is certain citizens can adjust.

Mr. Snodgrass testified that an overlay created less initial confusion because current customers retained existing numbers. He recognized that it does create ten-digit dialing, but did not perceive that as an insurmountable problem, especially in light of programmable phones and speed dials. He recognized that there is an adjustment period, but believed the overlay made the most sense. He also testified that Alternative No. 3 would split the Salem/Roanoke County communities and therefore would be particularly troublesome.

Pat Eubank, a resident of Botetourt County, a home contractor and a real estate broker, testified that the bulk of her county needs to call Roanoke and only recently has been able to call Roanoke without incurring long distance charges. She urges a split which allows the Roanoke Valley to remain intact. She urges the Commission to chose Alternative No. 2 where the split would be north of the Roanoke Valley, and further urges the Commission to allow the Roanoke Valley to retain the 540 area code because it is more rural and the cost of change will impact more individuals. Her second choice would be the overlay although she noted that it would be hard from a real estate point of view because of all the digits that she would have to dial.¹¹

Ann Marie Green, director of community relations for the County of Roanoke also testified in opposition to any proposal that would split the Roanoke Valley and its strong identity as a region. She

⁹Transcript 19 - 21.

¹⁰Transcript 27 - 29.

¹¹Transcript 25 - 26.

expressed concern with splitting government and school buildings into two area codes and expressed concern with the emergency 911 system. She prefers Alternative 2 which would not divide the Valley.

Melvin Johnson, a resident of Roanoke, offered testimony. His preference would be Alternative No. 4. He noted that we already have enough digits to dial.

Nine public witnesses testified on February 24, 2000, in Abingdon. Five witnesses testified in favor of an overlay, three favored a geographic split, and one witness, Louis Atkins, urged the Commission to stop and look at the whole state. He urged the Commission to consider a longer term solution.

Harold M. Thomas, Jr., co-owner of Castlewood Farm Supply in Castlewood, Virginia and president of the Russell County Chamber of Commerce, testified that when the 540 area code was created, his business incurred costs that he had not anticipated. He had to reprint invoices, letterhead and business cards, and change lettering on trucks, doors, and signs. The cost jeopardized the financial health of his business. He acknowledged the elderly may be confused with ten-digit dialing, but indicated that the majority of the population is already used to multiple communication numbers with landline and cellular telephones, the web, fire/radio numbers, and beeper numbers.¹² He added that although the Russell County Chamber of Commerce voted in favor of an overlay, there was one abstention and one vote opposed. He reported that the vote in opposition was concerned that any lines that might be added in the future at an existing business or residence could be assigned the new overlay area code.

Jay Cox, affiliated with NA Communications, a competitive local exchange carrier (“CLEC”) testified that he was in favor of the overlay plan. He recognized that the entry of CLECs into the market has contributed to the further exhaust of phone numbers. He expressed his hope that additional technologies in the future would alleviate some of the problem, but expressed his belief that one change now would be preferable to facing further changes down the road.¹³

Nicole Sikora testified on behalf of the Southwestern Virginia Technology Council representing 14 counties. She supports the overlay plan, and believes that it would impose less stress and disruption.

Steve Holloway, testifying on behalf of the Board of Directors and the Chamber of Commerce of Smyth County, advised that he would like to see 540 remain his area code, but if not, he would support the overlay to avoid changing stationery and business cards. He testified that those expenses hit a poor area harder.

Don Bartholomay, a resident of Lebanon, Virginia, appeared at the evening hearing in Abingdon. He expressed his desire to keep the 540 area code. He testified that not long ago when 540 was created from the 703 area, he had just finished his doctorate, gotten stationery and business cards printed, and he still has them at home. He indicated changing the area code again would cause difficulties in communications with instructors and students across area codes. If his geographic area could not retain the 540 area code, he would favor an overlay.¹⁴

Mr. Willard Owens represented the Buchanan Board of Supervisors and the Buchanan County Chamber of Commerce.¹⁵ He testified in opposition to the overlay but expressed no preference between Alternatives 2, 3, and 4. He testified that the overlay would be confusing and inconvenient. The increased dialing of digits would promote more errors. He expressed particular concern with our senior citizens. He related that he has an uncle who is 87 and sometimes has problems even with seven digits.

¹²Transcript 77 - 79.

¹³Transcript 80 - 81.

¹⁴Transcript 97 - 99.

¹⁵Transcript 74 - 75.

Timothy Potter also appeared at the afternoon hearing in Abingdon. He represented the Town of Grundy and expressed concern with the confusion that elderly citizens would experience with an overlay. Mr. Potter preferred one of the geographic splits rather than the overlay.¹⁶

Sharon Stevens also testified in Abingdon. She too expressed concern that we face a national problem, and urged broad consideration. She too was concerned with the aging population in southwestern Virginia and was concerned that they might be unable to access needed help or call relatives if they had to dial ten digits. Some, she indicated, still use rotary phones and could get lost looking at long numbers. Phone books have been printed with smaller fonts, which is harder for the elderly to read, and ten digits would likely require even smaller fonts.¹⁷

On February 29, 2000, local hearings were convened in Harrisonburg. Five public witnesses appeared following a presentation by Ms. Kenworthy, from NeuStar, which was similar to that given in Roanoke and Abingdon. One witness, Roger High, testifying on behalf of a small wireless provider, supported an overlay explaining that any kind of a split would result in reprogramming anywhere from 40 to 60,000 customer phones, a tremendous hardship on the customers and the company.¹⁸ Three witnesses, Raymond Shoemaker,¹⁹ C. Douglas Wine, and Barbara C. Hutchens supported a geographic split.

C. Douglas Wine spoke on behalf of two organizations that he manages, North River Telephone Cooperative and Shenandoah Valley Cooperative. He opposed Alternative 2 which would split Staunton and Harrisonburg. His Cooperative members would have ten-digit dialing to Harrisonburg and Rockingham County, but also could face the change to a new area code. He supported Alternatives 3 or 4 both of which draw the geographic line at Natural Bridge or near Roanoke with the 540 area code remaining in the northern part. He urged the Commission to place a high priority on a solution that would last for some time rather than applying another fix that will last only five to six years.²⁰ He repeated the testimony that the change to 540 from the 703 NPA in 1995 was expensive for businesses and inconvenient for everyone.

Barbara C. Hutchens testified at the 7:00 p.m. hearing in Harrisonburg. She testified that she moved back to the area seven years ago and since then both her area code and zip code have changed and now she faces yet another area code change. She urges the Commission to adopt a plan that will last for awhile. She favored Alternatives 3 or 4.

Wayne Rothery testified that none of the plans were acceptable, especially Alternative No. 3 which would split Salem and Roanoke, a significant community of interest. Another plan, Alternative No. 2, would split a trading area between Harrisonburg and Staunton. He observed that a tremendous amount of business goes on between those two areas. Mr. Rothery testified that part of the problem is

¹⁶Transcript 76.

¹⁷Transcript 101 - 102.

¹⁸Transcript 125-126.

¹⁹Transcript 121.

²⁰Transcript 122-125.

coming from cellular phones. He too is looking for a long-term solution and recommended that the Commission institute a statewide policy of overlapping area codes, with cellular phones having one area code and land lines retaining existing codes. Mr. Rothery also encouraged the Commission to take conservation measures and provide for numbers to be given out in smaller increments. He observed that a lot of numbers are reserved that cannot be used.²¹ If an overlay or geographic split must be imposed, Mr. Rothery recommended that multiple areas be established to assure a longer life for relief.

On March 1, 2000, public hearings were convened in Front Royal. Eight witnesses appeared at the afternoon and evening sessions of the hearing in that locality. Jimmie K. Ellington, Eddie Lynch, Kelly Walker, Thomas J. Christoffel, and R. Duane Wilson testified in support of an overlay, although Mr. Wilson also testified that his household was divided on the issue. His wife and daughter favored a geographic split.

Mr. Ellington testified that he and his wife have been in the same house for about ten years, but his street address has been changed by the county three times; his zip code has been changed by the post office one time; and his area code has been changed already one time. He recalled that when 703 was enacted it was supposed to last forever, but twenty years later 804 was created, and ten years later 540 was added. The projected life to exhaust for the 540 area code at the time it was implemented was 35 years, but it has lasted only a little over four years. He said that ten-digit dialing will be a little inconvenient but many phones have automatic dial.

Eddie Lynch, the public affairs manager for Sprint in Charlottesville, supported an overlay because existing telephone numbers will not change, new overlays can be implemented easier for future relief, customers can keep their numbers forever, an overlay provides uniform ten-digit dialing patterns, and no reprogramming of wireless phones is required. Further, Mr. Lynch reported that the geographical local number portability will require ten-digit dialing anyway.

Kelly Walker, executive director of the area chamber of commerce testified that the chamber has 547 members of whom 85% are small business members and support the overlay alternative. Her members prefer ten-digit dialing over a change in their area code due to the business costs triggered by a new area code. She also discussed problems informing customers of a changed phone number.

Thomas J. Christoffel testified that he worked as a regional planner, and in his opinion, it is critical to keep the I-81 corridor within a single geographic area code due to its growing community of interest.²²

R. Duane Wilson, a resident of Front Royal, reported that his household was split. His wife and daughter want a geographic split while he favors an overlay. He reported that he was not concerned with the cost of reprinting stationery. After the last area code change, he ordered new stationery. The day he picked it up he got a post card from the county advising that addresses were changing. He

²¹Transcript 126-131.

²²Transcript 215-217.

reported that he bought a color ink jet printer and started printing his own letterhead and business cards. He however favors an overlay because he designs performing arts facilities and other buildings with extremely long lives. Area code changes create problems maintaining contacts with his customers. He also urged the Commission to give more attention to number conservation.

Kimberley Fogle testified in support of Alternative 4, asserting that ten-digit dialing would cause confusion and would be especially troublesome for low income and the elderly.

Mark Bayliss observed that part of the problem is the meteoric rise in CLECs in the industry since each new CLEC gets a block of 10,000 numbers in each rate center that they propose to provide service. He also discussed the effects of ten-digit dialing on the Internet and e-commerce business, testifying that the cost of implementing ten-digit dialing would be significant.²³

John Murtagh, an industrial consultant with clients all around the world shared his frustration with the change to 540. Bell Atlantic had mailed out information about the change in area code to all the wrong subscribers. Moreover, the temporary intercept recording on the telephone line was unintelligible. He suggested that if a change must be made, Bell Atlantic should offer a simple recording saying simply and slowly “the area code has been changed.” He recommended a separate area code for cellular phones, and reported that the system works well in New Zealand.

On March 22, 2000, a public hearing in this matter was convened in Richmond in the Commission’s courtrooms. Jill Butler with Cox Virginia Telcom, Inc. offered testimony as a public witness. She testified that Cox is a facilities-based CLEC in Virginia, providing local exchange service to residential and business customers over the facilities of its cable affiliates. Cox supports the Commission Staff’s recommendation for a geographic split for the 540 area code as being the most competitively neutral approach. She testified that new entrants must fight for every customer they get and tend to get the majority of the new codes. The original area code is often associated with stability since it has been established for a long time. In Virginia, with its history of rich culture, the notion of being established is very important.²⁴ She acknowledged that local number portability alleviates this concern to some extent, but not all incumbent local exchange companies offer local number portability today.

NeuStar offered the testimony of D. Wayne Milby.²⁵ Deborah T. Grover testified on behalf of Verizon Virginia.²⁶ Sandra S. Bocclair offered testimony on behalf of Staff.²⁷

Mr. Milby, the senior NPA relief planner for the eastern region of NeuStar, testified that NeuStar declared the 540 NPA to be in jeopardy on December 14, 1999, and the Industry, by consensus, agreed to ration NXX codes at the rate of six per month. He further testified that the recent

²³Transcript 173-183.

²⁴Transcript 232.

²⁵Transcript 235.

²⁶Transcript 258.

²⁷Transcript 273.

return of central office codes to the 540 NPA has extended the projected exhaust date beyond the first quarter of 2002. He stated that with the implementation of an all-service overlay in the 703 NPA, 16 central office codes were no longer required to be protected to preserve seven-digit dialing between the 540 and 703 NPAs.²⁸ Those 16 NXX codes were thus made available for assignment in the 540 NPA. In addition, in January, service providers returned 15 central office codes and those codes are now available for assignment in the 540 NPA. Based upon the return of these 31 central office codes and existing procedures rationing NXX codes, the 540 NPA is projected to exhaust during the third quarter of 2002.²⁹

Mr. Milby testified that NeuStar conducts area code relief planning in accordance with the Federal Communications Commission ("FCC") rules and Industry guidelines. In response to cross-examination, Mr. Milby testified that the ultimate form of the relief alternative proposed by Staff meets Industry guidelines,³⁰ noting that a relief alternative should have five or more years of life, and that the difference in the lives of the alternatives should not be more than 15 years.³¹ Mr. Milby emphasized that as a neutral third party administrator, NeuStar has no independent view regarding the selected NPA relief plan. Mr. Milby testified that the guidelines also recommend that customers undergoing number changes should not be required to change again for a period of eight to ten years.³² Mr. Milby also testified that lives are projected for area code relief by starting with the exhaust dates contained in the latest COCUS Report, a document that is prepared annually based on a submission of forecasts from the Industry. When the 1999 COCUS Report was done, only 40% of the service providers provided forecasts. Those 40%, however, represented 80% of the codes. In order to project the lives of the split alternatives, NeuStar takes the total growth projected over the period of time covered by the COCUS Report and apportions that growth to each rate center on the basis of the number of existing codes in each rate center. NeuStar exercises its judgment in projecting lives for area code relief since it is not an exact science. Once NeuStar distributes the total growth for the NPA among the rate centers, it attempts to draw split boundaries that balance the resulting areas.

Deborah T. Grover testified on behalf of Verizon Virginia.³³ Ms. Grover testified that Staff's three-way split alternative makes the geographic split more painful for customers because ultimately two-thirds of customers face a change to a new area code complete with its disruption and expense. Two-thirds of the customers in the 540 area code represent about 750,000 wire lines.

Verizon Virginia favors an overlay.³⁴ Ms. Grover testified that the vast majority of letters received by the Commission in this case supported an overlay. She testified it is the least disruptive

²⁸Transcript 236.

²⁹Transcript 237.

³⁰The Industry guidelines are entitled "NPA Code Relief Planning & Notification Guidelines." The most recent guidelines were reissued November 8, 1999. (Transcript 242, 246; Exhibit DWM-3).

³¹Transcript 242.

³²Transcript 246.

³³Exhibit DTG-4.

³⁴Transcript 262.

alternative, treats all customers in all segments of the Industry in a neutral manner, and is the most forward-looking option in terms of future code conservation and future relief.³⁵

³⁵Id.

She testified that mandatory ten-digit dialing began on March 1, 2000, in the 703 area code, and that Verizon Virginia “found that customers made that transition very smoothly. Despite some of the apprehension up front, the reluctance to change dialing patterns, concerns about remembering to dial ten digits, the reality was the transition was made very quickly and very easily.”³⁶ Bell Atlantic collected call volumes that came to operator service centers because people were unable to complete calls, calls that came to repair centers, and calls that reached an intercept recording when a customer dialed seven digits instead of ten. When the change was implemented they experienced spikes in the calls to operator service centers and to the intercept recording. “Just two weeks after the completion. . .of mandatory dialing, on March the 15th, the data that we collected showed that 97% of the calls originated in Bell Atlantic territory were done so with 10 digits.”³⁷

In response to Cox and the Virginia Cable Telecommunications Association comments that an overlay would stifle competition, Ms. Grover testified that some competitors favor an overlay. Adelphia Business Solutions, a CLEC, filed comments in support of an overlay. In Northern Virginia some CLECs have requested specific assignment in the new area code even when there are still NXX codes available in the old area code. Ms. Grover agreed that incumbent companies control about 67% of the available codes in 540 and wireless carriers control about 24%.³⁸

On cross-examination, Ms. Grover testified that the only problem with the 703 area code overlay implementation was the need to delay implementation for security alarm companies that had not completed the work they needed to do by the March 1st date. Ms. Grover observed that her company’s overall objective is to see the entire state of Virginia adopt overlay as the single method of area code relief. “It would be prudent to plan now to move back towards uniformity as the current wave of area code relief across the state is completed.”³⁹ Ms. Grover added, that she believed “it is simpler for customers to have a uniform dialing plan than to have a mish-mash of seven-digit dialing in some cases to some locations for local calls and ten-digit dialing to other locations for local calls.”⁴⁰

On behalf of Staff, Sandra S. Bocclair, senior telecommunications specialist with the Division of Communications, offered testimony.⁴¹ Ms. Bocclair identified a relief alternative with three ways to implement it for the Commission’s consideration.

Alternative 5 – Geographic Split

Staff proposes a three-way geographic split. The three geographic areas could be split simultaneously. Area A could retain the 540 NPA and Areas B and C would get new NPAs. In Alternative 5 there are only two local calling routes that cross an NPA boundary, two small areas, Raphine to several neighboring communities including Brownsburg, Lexington, Buena Vista, Glasgow,

³⁶Transcript 263.

³⁷Transcript 264.

³⁸Transcript 265.

³⁹Exhibit DTG-4, at 8.

⁴⁰Transcript 270.

⁴¹Exhibit SSB-5.

and Natural Bridge; and Ballard to Meadows of Dan.⁴² Ms. Bocclair testified that Raphine, however, has a strong community of interest to Staunton so Raphine was included on the Staunton side of the dividing line. The counties that would be divided by Alternative 5 would be Bath, Rockbridge, a small part of Giles, and a little of Patrick. Moreover, she was not certain if the Raphine routes were optional calling routes.⁴³ Area A would have a projected life of 15 years, Area B of 25 years, and Area C of 26 years.⁴⁴

Alternative 5A – Phased Implementation

Alternative 5A offers another way to implement the same geographic split. With this variation the existing 540 area would be initially split into two areas – A and B/C. B/C would retain the 540 area code and A, as part of Phase I implementation, would get a new area code. In eight years, B and C could be split and B would probably be the area that retained the 540 area code since it has the most access lines.

Alternative 5B – Phased Implementation

Alternative 5B provides another option for implementation, with the Phase I split dividing Areas A/B and C. Area C would get a new area code and in four years A and B would split, with Area A retaining the 540 area code and Area B getting the new area code since it has fewer access lines than Area A.

Ms. Bocclair testified that California has recently implemented a three-way phased split which offered the possibility of allowing a longer period of time before relief would be needed in some of the more rural areas. Ms. Bocclair testified that Area A includes approximately 450,000 customers, and B and C combined includes 620,000 customers.⁴⁵

Ms. Bocclair based her recommendations on public sentiment or conversations she had with 50 to 60 individuals in attendance at the public hearings in Roanoke, Abingdon, Front Royal and Harrisonburg.⁴⁶ She talked to many business representatives and individual citizens that came to the hearings, many of whom came to listen and expressed their opinion to her, but did not testify on the record. “I believe it has a lot to do with rural environment versus the urban or metropolitan environment. The citizens that spoke, . . . said they would much rather have a new area code change than they would to have to change to ten digits.”⁴⁷ She noted that we have had different types of dialing around the state for different customers over the years and in fact, our smallest telephone company

⁴²Transcript 291.

⁴³Transcript 298.

⁴⁴Transcript 277.

⁴⁵Transcript 279.

⁴⁶Transcript 294.

⁴⁷Transcript 281.

changed from four-digit dialing to seven-digit dialing only last November.⁴⁸ Several public witnesses in southwest Virginia also testified that they remember three- and four-digit dialing.

In response to Ms. Grover's testimony, Ms. Bocclair noted that although Northern Virginia has started dialing ten digits, it has not implemented the new 571 area code, so the full impact of an overlay in Northern Virginia at the time of the hearing in this case was unknown.

Ms. Bocclair observed that she did not know the impact of number conservation but there are a number of things that may help ease the exhaust of new numbers especially with new NPAs.⁴⁹ She, however, expected the biggest impact from conservation measures to be in Richmond, Norfolk, Roanoke, and Northern Virginia. She observed that one of the conservation measures that is being considered is adoption of an NPAX code. There is some discussion at the federal level about taking some of the NPA codes that exist today and adding a fourth digit. Therefore, if you were calling a number in the 540 area code, you might be able to subdivide it to 5401, 5402, 5403, etc.

She also reported that on November 29, 1999, the Commission sent a petition to the FCC asking that it delegate authority to the Commission to implement number conservation measures, but she again warned that she did not know the impact of conservation measures that could be initiated since we do not have utilization data to make the determination. The FCC granted that authority on July 20, 2000.⁵⁰ Ms. Bocclair advised that it will be about two years before the guidelines can be implemented because an administrator for thousand block pooling must be selected through competitive bidding, and it will be at least nine months later before the chosen vendor is up and working.

Ms. Bocclair explained that central office codes are rationed during jeopardy so that each month only a few central office codes are distributed, but the lines themselves are not being rationed and the central office codes actually include blocks of 10,000 telephone numbers.⁵¹

Over ninety written comments and letters were received from January through April 2000. On behalf of his constituents, U.S. Representative Rick Boucher opposed an overlay, preferring a geographic split. Seventeen individuals and two businesses also favored a geographic split or opposed an overlay. Seven Buchanan County supervisors and the Buchanan County city manager opposed the overlay. Generally, they were concerned with ten-digit dialing, confusion, and difficulty determining which area code to use.

Virginia Senator Russell Potts and Delegate Beverly Sherwood both wrote in favor of an overlay. Also supporting an overlay were 23 individuals; 23 businesses; Mayors of the Cities of Purcellville and Winchester; Frederick, Loudoun, and Rockingham Counties Boards of Supervisors; Russell County Development Authority; Dickenson County Community Services; and the Culpeper,

⁴⁸Id.

⁴⁹Transcript 284.

⁵⁰*Petition of Virginia State Corporation Commission for Expedited Decision on Delegation of Authority to Implement Number Conservation Measures*, DA00-1616, NSD File No. L-99-95 (Order released July 20, 2000).

⁵¹Transcript 135-136.

Blacksburg, Roanoke, and Smyth County Chambers of Commerce. Many expressions of support were form letters including six different forms from one individual (counted only once). They wrote that changing area codes was costly to small businesses. They argued that an overlay was fairer and more convenient, was implemented successfully in Northern Virginia and elsewhere, was least disruptive, and let existing customers keep their existing numbers.

Several telecommunications companies also filed comments. CFW Communications submitted comments in favor of an overlay. It contends that Staff's Alternative 5, a three-way split, would separate the Clifton Forge, Covington and Potts Creek exchanges from the Waynesboro exchange. Although CFW Communications admitted that it can set up translations in the switch to accommodate the change in area codes between the two areas, that would not be their preferred alternative.

Verizon South and Verizon Wireless also urged the Commission to adopt an overlay. They assert that overlays are faster, easier and less costly to implement than splits, and provide effective relief and optimal use of area code resources. They contend that those benefits outweigh the inconvenience associated with ten-digit dialing. They observed that the FCC has warned that "state commissions may not use conservation measures as substitutes for area code relief or to avoid making difficult and potentially unpopular decisions on area code relief."⁵²

Cox Virginia Telecom Inc. filed comments in addition to public testimony in this case. Cox continued to favor a geographic split as the relief measure that might provide the greatest possible relief for pending area code exhaust with the least disruption and confusion for consumers and the least adverse effect on competitive providers. Cox asserts that a geographic split would maintain the geographic orientation traditionally associated with telephone numbers, preserve seven-digit dialing throughout the NPA area for local calls, ensure the relief plan is neutral and preserve the ability to consider an overlay option at a future time. Cox contends that ten-digit dialing is inconvenient and confusing, especially for the elderly, the young, and persons with disabilities. It poses problems adapting to and remembering longer numbers and remembering which numbers have which area codes.

Cox recognizes that the availability of local number portability ("LNP") serves to mitigate the anticompetitive impact of an overlay. It notes that without LNP, an overlay is not at all viable; however, Cox still is concerned with some unresolved issues. For instance, even with LNP, a customer may move from the incumbent to a new competitor and may retain its existing 540 telephone numbers. If that customer wants to add new lines, additional 540 numbers may not be available, and the result would be two different area codes at the same location. Moreover, LNP is not fully deployed in the 540 area code.

If the Commission chooses an overlay, Cox recommends certain guidelines. First, the Commission should order the ILECs to develop and implement customer education programs that

⁵²Memorandum Opinion and Order on Reconsideration, *In the matter of: Petition for Declaratory Ruling and Request for Expedited Action on the July 15, 1997 Order of the Pennsylvania Public Utility Commission Regarding Area Codes 412, 610, 215, and 717; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, NSD File No. L-97-42, CC Docket No. 96-98 (September 28, 1998) ¶38.

explain the attributes of an overlay. Second, LNP in Virginia should be mandatory and problem-free. Third, unassigned NXXs in the original area code should be set aside for CLECs to mitigate the imbalance in the assignment of area codes between the ILECs and new entrants. Fourth, the Commission should order unassigned number porting, the porting of a phone number from one LEC to another without the requirement that the customer must have previously had an access line with the porting company. That would allow a customer that ports one line to a new LEC to have additional lines at the same premises with the same area code.

In post-hearing comments Cox commends the Staff for heeding the concerns of customers in developing a three-way geographic split to preserve seven-digit dialing for all but two or three local routes. Relief provided by Staff's alternative is 15 years for Area A and 25 and 26 for Areas B and C respectively. Even the shortest period of relief is longer than the overlay relief plan recommended by the Verizon and Sprint Companies. If any of the several numbering conservation measures now being explored by the FCC are implemented, the relief time frame may be extended even further. Cox reports that Staff's three-way split maximizes public benefit by extending the relief period to 15 to 26 years (depending on the area) versus 10.7 for the overlay; maintains geographic orientation traditionally associated with telephone numbers; reserves seven-digit dialing throughout the NPA areas; ensures the relief plan does not have an adverse effect on new entrants; and preserves the ability in any future relief cycle to consider an overlay after number conservation measures have been implemented.

Virginia Cable Telecommunications Association filed comments identical to Cox's comments supporting a geographic split.

AT&T comments urged the Commission to seek area code relief that is competitively neutral, meaning that it does not favor incumbent carriers over existing carriers, nor favor one type of technology over another. AT&T also asserts that overlay plans are discriminatory to new entrants because in most instances only the competitive LECs would be assigned blocks of numbers in the new area code while the incumbent carrier would continue to assign numbers in the old area code familiar to customers. If the Commission adopts an overlay approach, AT&T urges the Commission to require ten-digit dialing for all calls, allocate remaining NXXs in the existing NPA on a nondiscriminatory basis, require permanent LNP, and apply the overlay equally to all telecommunications carriers and services.

If the Commission decides in favor of a geographic split, AT&T urges the Commission to avoid dividing rate centers that could cause considerable implementation and administrative difficulties for carriers. It notes that where a central office code territory is bisected by county lines, each carrier would be required to duplicate central office codes in each NPA for each rate center to maintain seven-digit dialing. AT&T also suggests that any geographic split should give wireless carriers the option of grandfathering their existing telephone numbers. Absent such a grandfathering, existing wireless customers would need to return their handsets for reprogramming, a burden to customers and an expense for the carrier. The FCC has made it clear that state commissions have the authority to

grandfather telephone numbers for existing wireless customers in the event of an area code split.⁵³ AT&T reports that the New York Public Service Commission has recently taken this approach in its decision to order a geographic split of the 914 NPA. That Commission found that “[t]o avoid the high cost of reprogramming, all existing wireless carriers will have their 914 numbers grandfathered regardless of which side of the line they are on. The Commission made clear that grandfathering was a carrier option and not a requirement and that existing wireless carriers could choose two phone numbers in either the old or new NPA.”⁵⁴

The Sprint Companies filed joint comments. They favor an all-service overlay for long-term, customer, competition, cost and public interest reasons. They note that geographic splits were implemented in an era with nominal competition and infrequent need of relief. An overlay does not require any existing customers to undergo the inconvenience or expense of changing their existing telephone number. The Sprint Companies recognize that overlays require the use of ten-digit dialing, but suggest that customer education can address any problems. They also contend that movement to ten-digit dialing for NPA relief now simply implements a dialing pattern that will be required in the future. The availability of telephones with speed dialing capability also provides dialing convenience for frequently called numbers.

DISCUSSION

The 540 NPA was created by splitting the 703 area code and was mandatory in January 1996 as the result of the pending exhaust of the 703 area code. Several witnesses testified that when their area code was changed to 540, however, the life of the relief was expected to be much longer than five years. Many urged the Commission to find a longer term solution this time. Many also urged the Commission to assure a smoother transition this time. Several witnesses related problems with the change. Mr. Murtagh reported that notice of the area code change was actually sent to the group of customers who were not going to experience a change rather than the group that was facing the change.⁵⁵

It is not surprising that the exhaust of telephone numbers has accelerated in the last few years. The boom in the wireless market, facsimile machines, multiple telephone lines in residences and businesses, and the advent of competitive providers has fueled the demand for assignment of phone numbers. The manner in which numbers are assigned, notably, assignment of numbers in blocks of 10,000, has exacerbated the exhaust.

⁵³*In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, et al., Third Order on Reconsideration of Second Report and Order and Memorandum Opinion and Order, released October 21, 1999 at ¶68-71.

⁵⁴*In the Matter of an Investigation of the Efficient Usage of Telephone Numbering Resources and Evaluation of the Options for Making Additional Central Office Codes and/or Area Codes Available in New York State*, Case 99-C-0800, Opinion and Order Directing a Geographic Split of the 914 NPA at 31 (November 4, 1999).

⁵⁵Transcript 185.

On July 20, 2000, the FCC granted Virginia authority to implement thousand-block number pooling. In granting that authority, however, the FCC stressed that conservation is not a substitute for area code relief, but the implementation of number pooling may extend the life of the adopted relief plan. There is no question, however, that numbers in the 540 area code will exhaust in the near term unless relief measures are taken. The central issue then is what form of area code relief should be implemented to address the projected exhaust of telephone numbers in area code 540.

Comments and testimony on the appropriate relief option to implement were very mixed and strongly felt. Many individuals or organizations speaking on behalf of individuals opposed an overlay because it would require 10- or 11-digit dialing for all calls. They were particularly concerned that their elderly population would have difficulty remembering long numbers. They offered testimony that multiple area codes within a geographic area would also add to the confusion since it would be difficult to know which area code to use. An overlay could even result in multiple area codes within a single residence. One witness also observed that the print in directories containing listings of telephone numbers would necessarily be smaller, again imposing a hardship on our elderly.

Businesses and business interests, however, were generally proponents of the overlay and applauded it as the fairest option to all since existing customers would retain their numbers and therefore avoid the expense of changing letterhead or business cards. Further, many testified that customers would not be lost due to their inability to find the phone number for the business. Proponents of the overlay contend that geographic splits are troublesome and costly, while overlays treat everyone the same, and implementation of successive relief in the form of additional overlays is simple and undistruptive.

Several witnesses also recommended that cellular phones and pagers be assigned a separate area code, but that solution must be rejected. While such a special technology overlay might be appealing, such proposals have been held to be unlawful by the FCC because they would unfairly discriminate against the carriers offering those services, in violation of Sections 201(b) and 202(a) of the Communications Act of 1934.⁵⁶

The telecommunications providers were divided, but the majority of carriers, including the incumbents, universally favored the overlay. Verizon Virginia contends that consistent calling patterns require adopting an overlay. It asserts that the country is eventually going to face 10- and 11-digit dialing and therefore the change should be made now. Ms. Grover also cites the Commission's decision to adopt an overlay in Northern Virginia as the first Virginia move in that direction.⁵⁷

It is clear that no one solution will satisfy all affected constituencies. The analysis then should begin with an overview of area code relief in the state. Northern Virginia is a highly populated area, and there was no clear geographic split that kept communities of interest intact in the 703 NPA. The Commission therefore implemented an overlay as the best relief option available for that area, but that decision alone does not require an overlay elsewhere.

Relief from number exhaust is pending in other areas of the state. A decision for the 804 area code is currently pending before the Commission. In that case, the hearing examiner has recommended

⁵⁶*Administration of the North American Numbering Plan*, CC Docket No. 92-237, Second Report and Order and Memorandum Opinion at 122-123 (August 8, 1996).

⁵⁷Transcript 263.

a geographic split with a concentrated growth overlay in the Richmond metropolitan area.⁵⁸ Richmond is densely populated and shares a strong community of interest with several surrounding areas. Relief for the 757 area code is also pending, hearings have concluded, and post-hearing comments have recently been filed. The area covered by that case is a combination of several highly populated areas and the more sparsely populated area on the Eastern Shore. The 540 NPA area at issue here, however, is different from all of those areas. It spans the entire western state boundary of Virginia and includes largely rural areas with several distinct metropolitan pockets.

Virginia is very diverse, and the same solution may not be appropriate for every area, as suggested by some of the Industry. Each area should be carefully assessed to determine the most workable solution for it. A statewide solution is not necessary or desirable.

Several of the alternatives considered by the Industry for relief in the 540 area and presented in this case, can be quickly rejected as ineffective and noncompliant with Industry Guidelines. Among other criteria, the Guidelines require a relief plan to be equitable and balanced.

Alternative 2 offers a geographic split that would provide projected relief for Area A for 22 years and Area B for only 5 years. The Guidelines require a more equitable division that results in reasonably comparable expected lives of the relief in the affected areas. A difference of 17 years is not balanced. The Industry did reach a consensus that this alternative was not adequate; Area B would face a need for further relief too soon. I agree that Alternative 2 should be rejected as inequitable.

The projected lives of the affected areas in Alternative 3 are more balanced, but this alternative should also be rejected. The Industry consensus also recommended rejecting this relief plan. The boundary of the dividing line would split the Roanoke Valley, a very significant community of interest.

Remaining for closer consideration are Alternative 1, the overlay; Alternative 4, a geographic split that creates two areas on either side of a line that runs south of Potts Creek, Eagles Rock and Glasgow; and Alternatives 5, 5a and 5b, geographic splits that divide the existing 540 NPA into three separate areas.

Alternative 4 provides more balanced relief options. Area A would experience relief for approximately 12.4 years, and Area B is expected to have a relief life of 9.3 years. Of the geographic split alternatives presented in the Petition, this one was the least objectionable to the public offering comments; however, the Industry did reach a consensus that this alternative should be rejected. Moreover, the overlay alternative and Staff's recommended three-way split offer much longer relief options than Alternative 4. Therefore, I also agree that this alternative should be rejected.

⁵⁸*Commonwealth of Virginia, ex rel., State Corporation Commission Ex Parte: In re: Investigation of area code relief for the 804 Numbering Plan Area*, Case No. PUC990159, Report of Michael D. Thomas, Hearing Examiner (July 19, 2000).

Alternative 1 is an all-service overlay, a relief method that has been approved by the Commission for use in Northern Virginia.⁵⁹ Overlays are still of relatively recent vintage and not enough time has elapsed to fully know the long-term effects. At the time of the hearing customers had begun ten-digit dialing; however, they were only placing 703 in front of their customary seven-digit dialing. Some companies are now applying for NXX codes in the new 571 area code in Northern Virginia, but only later will customers have to remember whether a particular number is preceded by 703 or 571.⁶⁰

Moreover, public witnesses raised a number of concerns with an overlay. Many observed that if a home or business decides to add a new line after the overlay is implemented, it could receive a different area code for the new line. Much concern was expressed for the confusion that will result from the use of multiple area codes in the same geographic area. An overlay ignores the confusion of multiple area codes in the same geographic area, or even in the same business or residence. As successive area codes are added, it certainly may become increasingly necessary to consult directories. Also directories with increasingly small print will be necessary to include the expanded numbers.

Although an overlay offers a reasonable solution in more densely populated areas, it would be preferable to maintain the geographic identity that comes with only one area code in an area when possible. Moreover, it would be advantageous to gain more experience with overlays, or allow time for other options, such as adding a fourth digit, to be further explored. The Commission can gain more experience with an overlay by adopting a geographic split option. Although customers in Northern Virginia had a mandatory overlay implemented in March 2000, experience is limited. Customers in the 703 area have not had to make calls in the new overlay area code. Until they do, customer acceptability cannot be fully evaluated. The Commission should continue with area code splits where it can for the present, and implement overlays only in urban areas with a community of interest that should not be divided.

Only one witness, Mr. Christoffel, testified that the entire 540 area shared a community of interest that should not be divided.⁶¹ Generally, however, rural areas can be geographically divided to preserve seven-digit local dialing for some time. This record contains testimony from citizens that still remember four-digit dialing in southwestern Virginia. The transition to seven-digit dialing has been made, but if 10- and 11-digit dialing can be avoided without adverse consequence, it is in the public interest to do so. The territory covered by the 540 area code can, and should be, geographically divided.

Staff recommends a three-way geographic split, and presented three different ways the Commission can consider implementing Alternative 5. First, Alternative 5 presents a three-way split implemented simultaneously. Area A has a projected life of 15 years; Area B has a projected life of 25 years; and Area C has a projected life of 26 years. Thus the shortest relief life of 15 years is still greater than the relief available from an overlay. The overlay is expected to provide relief for approximately 11

⁵⁹*Commonwealth of Virginia, ex rel. State Corporation Commission Ex Parte: In re: Investigation of area code relief for the 703 code of Northern Virginia*, Case No. PUC960161, 1998 S.C.C. Ann. Rep. 212.

⁶⁰Transcript 283.

⁶¹Transcript 216.

years before another overlay area code would be necessary. Staff was criticized for proposing a relief option that was not subject to public or Industry scrutiny. To the contrary, Staff should be commended for listening and responding to public comment. Indeed, many commenters urged the Commission to find a solution that would last longer, and several recommended that the affected area be divided into more than two new areas. Moreover, the Industry had opportunity to, and did comment on the proffered three-way split both at the last hearing and in post-hearing comments. In those comments, Industry representatives argued that Staff's recommendation was not better, but rather, inferior to other two-way geographic split alternatives because two-thirds of all customers ultimately would be required to change phone numbers. Yet, Staff testified that Area A included approximately 450,000 customers and Areas B and C included approximately 620,000 customers.⁶² Accordingly, if Alternative 5 is implemented in a manner that allows Area A to retain 540 as its area code, 42% of customers remain totally unaffected.

If the relief plan is phased in, however, more customers are unaffected for a longer time, and those that ultimately still have to change area codes are afforded more time to plan.

Alternative 5a suggested by Staff differs from Alternative 5 only in its phased implementation. Under this alternative, the 540 area code would be initially split into two areas, Area A and Area B/C. Area B/C would retain the 540 area code and seven-digit dialing. Area A, the area north of Staunton and Harrisonburg would be assigned a new area code. Area B/C would thus enjoy a longer period, approximately eight more years, before that area would need to be split. At that later time, Area B including Roanoke and the surrounding community, would retain the 540 area code and Area C to the southwest would receive a new area code. The ultimate projected life of this alternative is the same as Alternative 5, or 15 to 26 years depending on the area.

Alternative 5b also varies from Alternative 5 only in its implementation. Under this alternative, the 540 area would be initially split into Area A/B and Area C. Area C in the southwest would be assigned a new area code. Area A/B could retain 540 for an additional four years before Area B, Roanoke and the surrounding communities would see a new area code. Area A, with 42% of the access lines in the existing 540 area code would experience no change.

I recommend phased in Alternative 5b. It provides long-lived balanced area code relief. Area A which would experience no change under Alternative 5b would retain the 540 area code and seven-digit local dialing. It would retain the geographic identity that exists with a single area code. No costs would be incurred to change the area code or to add the area code as might be necessary with an overlay solution. It is estimated that no further relief would be necessary for this area for 15 years.

Area B, which includes Roanoke and the surrounding communities, would not suffer division of its strong and often cited community of interest. This option preserves the cohesiveness of the Roanoke Valley and its common community of interest. Although this area would ultimately face a new area code, the phased approach set forth in Alternative 5b would allow businesses at least four years to

⁶²Transcript 279.

exhaust supplies of stationery and business cards, and prudently plan for the change. The projected four years could also be positively affected by conservation measures. This relief option ultimately is expected to address number exhaust in Area B for 25 years, a life expectancy that again could be extended by prudent conservation measures now being considered.

Area C would be affected the hardest and most immediately. However, it was in this area in particular that we were reminded that four-digit dialing was still a recent memory. It was from this area that we heard the greatest concern for our aging population, confusion with ten-digit dialing, and multiple area codes in one geographic area. Many indicated a preference for the temporary inconvenience of a new area code rather than face the long-term inconvenience and confusion with an overlay code. Although hard hit, there are also fewer lines in this area than any other.

Receiving a new area code also could be a positive opportunity. The area may be advantaged by receiving an area code that could aid marketing efforts and foster community pride. NeuStar should file a list of available area codes as comments to this report. The Commission could then request codes that reflect the area to which they will be assigned. For example:

| Area Code | Corresponding Letters | | | | Possible References |
|------------------|------------------------------|---------|---------|-----|--|
| 221 | 2 = ABC | 2 = ABC | 1 | AC1 | All American City 1 (awarded in 1999) |
| 276 | 2 = ABC | 7 = PRS | 6 = MNO | BRM | Blue Ridge Mountains |
| 823 | 8 = TUV | 2 = ABC | 3 = DEF | VAF | Virginia First |
| 826 | 8 = TUV | 2 = ABC | 6 = MNO | TAM | The Appalachian Mountains |
| 878 | 8 = TUV | 7 = PRS | 8 = TUV | VRV | Valley Region of Virginia |

Finally, more than one witness testified about the confusion that accompanied the change to 540. The wrong group of customers received notice of the area code change. When the error was discovered notice was quickly placed in newspapers. One witness also testified that the intercept recording was not understandable.

The Commission can minimize changes in this case by directing the Industry to provide clear, direct and accurate notice, and to coordinate the timing of any change ordered in this case to minimize costs and inconvenience. Costs to businesses can be minimized with sufficient notice, i.e. replenish existing inventories of stationery and business cards to reflect the new area code. The incumbent LECs also should be directed to provide ample customer education, and a clear intercept recording warning callers that the area code may have been changed and offering assistance.

The impact of changes in area code can be further minimized by grandfathering cellular phones as recommended by AT&T and Verizon Wireless, among others, to avoid the time and expense of returning phones for the sole purpose of having them reprogrammed. The telephone number of each cellular phone is programmed into the phone itself. If a phone number or area code is changed, the phone unit must be reprogrammed manually, generally by the carrier's technicians. Temporary

grandfathering may alleviate logistical problems with reprogramming phones during a short transition period, but does not eliminate the burden on customers and carriers to reprogram thousands of handsets. Wireless carriers, therefore, seek, and should receive, the option to permanently grandfather customers' numbers. Such treatment is consistent with FCC authority and the approach adopted by other states. For a wireless customer, the telephone number is not necessarily linked to a particular geographic area.

FINDINGS AND RECOMMENDATIONS

In conclusion, based on the evidence received in this case, and for the reasons set forth above, I find the Commission should approve Alternative 5b, a phased three-way geographic split, as the best method for area code relief for the 540 area code. Accordingly,

I RECOMMEND that the Commission enter an order that:

1. ***ADOPTS*** the findings in this Report;
2. ***APPROVES*** Alternative 5b for area code relief for the 540 area code; and
3. ***PERMITS*** wireless carriers in Area C, and later Area B, the option of allowing their customers to retain their existing telephone numbers.

COMMENTS

The parties are advised that any comments (Section 12.1-31 of the Code of Virginia and Commission Rule 5:16(e)) to this Report must be filed with the Clerk of the Commission in writing, in an original and fifteen (15) copies, within fifteen (15) days from the date hereof. The mailing address to which any such filing must be sent is Document Control Center, P.O. Box 2118, Richmond, Virginia 23218. Any party filing such comments shall attach a certificate to the foot of such document certifying that copies have been mailed or delivered to all counsel of record and any such party not represented by counsel

Respectfully submitted,

Deborah V. Ellenberg
Chief Hearing Examiner